IN THE CLAIMS

1. (Currently Amended) A method of testing and measuring an IC (integrated circuit) chip, comprising:

prior to manufacturing,

determining a change of a temperature sensitive parameter of the chip, that is predictable with change of temperature;

during manufacturing,

measuring the temperature sensitive parameter of the chip during testing of the chip,

measuring the chip temperature during or following the measurement of the temperature sensitive parameter,

determining an adjusted temperature sensitive parameter of the chip based upon the measured temperature sensitive parameter of the chip during testing, the measured chip temperature, and the determined change of the temperature sensitive parameter of the chip with temperature;

testing the chip to determine a realistic indication of speed at a predetermined maximum temperature; and

sorting the chip into a speed category.

2. (Original) The method of claim 1, further including sorting the chip into a category based upon the adjusted temperature sensitive parameter of the chip.

3. (Original) The method of claim 1, further including determining a change of the temperature sensitive parameter of the chip that is the chip maximum operating frequency Fmax.

4. (Original) The method of claim 3, further including measuring the chip temperature with an on-chip diode.

5. (Previously Presented) The method of claim 4, further including measuring the chip temperature with the on-chip diode by forcing a current through the on-chip diode, measuring the diode voltage at the start of test when the temperature during test Tdtest is known, and measuring the diode voltage again after the Fmax test when the temperature Tdtest is unknown, and using the measurements to determine a predicted Fmax at Tmax, based upon which the part is sorted into speed categories.

6. (Original) The method of claim 1, further including determining a change of the temperature sensitive parameter of the chip that is the chip power consumption.

7. (Original) The method of claim 1, further including determining a change of the temperature sensitive parameter of the chip that is the chip I (input)/O (output) timings.

8. (Original) The method of claim 1, further including determining maximum and minimum voltage tests which measure the highest and lowest possible voltages at which a product will operate.

9. (Currently Amended) The method of claim 1, wherein ~~further including~~ testing the chip further comprises testing the chip in preproduction tests ~~to provide a realistic indication of speed~~

~~at Tmax~~ for performance modeling purposes to predict the speed of chips and the percentages of good/operative chips ~~sorted into speed categories~~.

10. (Original) The method of claim 1, further including testing the chip in production tests to classify each chip into different categories of the temperature sensitive parameter.

11. (Currently Amended) A method of testing and measuring an IC (integrated circuit) chip, comprising:

determining a change of a temperature sensitive parameter of the chip, that is predictable with change of temperature, with temperature;

measuring the temperature sensitive parameter of the chip during testing of the chip,

measuring the chip temperature during or following the measurement of the temperature sensitive parameter,

determining an adjusted temperature sensitive parameter of the chip based upon the measured temperature sensitive parameter of the chip during testing, the measured chip temperature, and the determined change of the temperature sensitive parameter of the chip with temperature;

testing the chip to determine a realistic indication of speed at a predetermined maximum temperature; and

sorting the chip into a speed category.

12. (Original) The method of claim 11, further including sorting the chip into a category based upon the adjusted temperature sensitive parameter of the chip.

13. (Original) The method of claim 11, further including determining a change of the temperature sensitive parameter of the chip that is the chip maximum operating frequency Fmax.

14. (Original) The method of claim 13, further including measuring the chip temperature with an on-chip diode.

15. (Previously Presented) The method of claim 14, further including measuring the chip temperature with the on-chip diode by forcing a current through the on-chip diode, measuring the diode voltage at the start of test when the temperature during test Tdtest is known, and measuring the diode voltage again after the Fmax test when the temperature Tdtest is unknown, and using the measurements to determine a predicted Fmax at Tmax, based upon which the part is sorted into speed categories.

16. (Original) The method of claim 11, further including determining a change of the temperature sensitive parameter of the chip that is the chip power consumption.

17. (Original) The method of claim 11, further including determining a change of the temperature sensitive parameter of the chip that is the chip I (input)/O (output) timings.

18. (Original) The method of claim 11, further including determining maximum and minimum voltage tests which measure the highest and lowest possible voltages at which a product will operate.

19. (Currently Amended) The method of claim 1, wherein ~~further including~~ testing the chip further comprises testing the chip in preproduction tests ~~to provide a realistic indication of speed at Tmax~~ for performance modeling purposes to predict the speed of chips and the percentages of good/operative chips ~~sorted into speed categories~~.

20. (Original) The method of claim 11, further including testing the chip in production tests to classify each chip into different categories of the temperature sensitive parameter.